

Gulf Island Pond

Aerial Monitoring Plan to Determine the Presence of Algae Blooms - 2004

In conjunction with the Gulf Island Pond Chl_a Monitoring Plan for 2004 the Department will conduct an aerial monitoring program to help verify the presence of algae blooms on Gulf Island Pond.

The aerial monitoring program will be conducted weekly from June 23 to September 15 subject to change based on flow and weather conditions. Whenever possible, aerial observations will be conducted on the same day of the week that ambient surface monitoring is conducted. However, the Department may need to fly on alternate days also.

Aerial observations will be conducted using a rented seaplane from the seaplane base on GIP in Turner. The seaplane will be piloted by Dave Silver, a DEP water permit writer who is a licensed pilot experienced in the use of seaplanes for water sampling and aerial photography. A second DEP staff person will document the visual observations with a camera, written log, and conduct water sampling as needed. The Department encourages participation during the aerial observations by a representative of the Androscoggin River licensed dischargers and a representative of the environmental advocacy groups. The plane will accommodate a total of 3 people plus gear.

A standard flight pattern will be developed during the trial runs to ensure complete observation of GIP from Gulf Island Dam to the head of the impoundment at Twin Bridges during each flight.

Photos will be taken during each flight at the following five locations corresponding to the surface sampling locations in the Gulf Island Pond Chl_a Monitoring Plan for 2004:

- | | |
|------------------|-----------------|
| a) Twin Bridges | River Mile 40.5 |
| b) Upper Narrows | River Mile 32.5 |
| c) Lower Narrows | River Mile 29.5 |
| d) GIP #4 | River Mile 28.5 |
| e) Deep Hole | River Mile 27 |

In addition, photos will be taken at any additional location on the pond that any observer in the plane believes exhibits conditions consistent with an algae bloom such as unusual coloration or presence of surface scums of algae.

Photos will be taken at multiple angles whenever conditions consistent with a bloom are observed. Contrasting features such as limits of blooms will be photographed if observed.

A written log will be maintained for each flight (see attachment A) to document observations, conditions during flight, and details for each photo taken.

If conditions consistent with a bloom are observed, the plane will land (if conditions permit) in the vicinity of the bloom to conduct water sampling consistent with the Gulf Island Pond Chl_a Monitoring Plan for 2004, or if possible contact will be made with surface monitoring crew via cell phone to collect samples in the vicinity of the bloom.

At the end of the sampling program all photos, observation logs, and sampling data will be compiled into a report to summarize findings. This report will be made available to interested parties on the DEP web site.

Daily Observation Log

Gulf Island Pond

Aerial Monitoring Program to Determine the Presence of Algae Blooms - 2004

Date: _____ Day: _____ Take off time: _____ Landing time: _____

Observers: _____

Weather:

Full sun Partly sunny Partly cloudy Overcast Rainy

Wind direction and speed: _____

Comments: _____

Photo # and Observations:

Twin Bridges (River Mile 40.5) Photo # _____

Observations: _____

Upper Narrows (River Mile 32.5) Photo # _____

Observations: _____

Lower Narrows (River Mile 29.5) Photo # _____

Observations: _____

GIP #4 (River Mile 28.5) Photo # _____

Observations: _____

Deep Hole (River Mile 27)

Photo # _____

Observations: _____

Additional locations where bloom conditions observed:

Location: River mile_____, _____

Photo #_____

Observations:_____

Location: River mile_____, _____

Photo #_____

Observations:_____

Location: River mile_____, _____

Photo #_____

Observations:_____

Location: River mile_____, _____

Photo #_____

Observations:_____

Location: River mile_____, _____

Photo #_____

Observations:_____

Observer Signoff

I have reviewed the above log sheet dated _____ and agree that the stated information is accurate.

Observer 1:_____ Do not agree_____ (see comments below)

Observer 2:_____ Do not agree_____ (see comments below)

Observer 3:_____ Do not agree_____ (see comments below)

Observer 4:_____ Do not agree_____ (see comments below)

Comments:

Aerial Monitoring Plan Staff List – Gulf Island Pond – 2004

This list identifies the DEP staff personnel who will participate in the aerial monitoring survey of Gulf Island Pond. The second staff person will document the visual observations with photographs of the monitoring stations established, record the written log, communicate with the surface water monitoring crew via cell phone and conduct water sampling (as needed) in accordance with the Monitoring Plan. The aerial monitoring platform is a seaplane that will depart from the Turner seaplane base on the westerly shoreline of Gulf Island Pond. The seaplane is scheduled for our mission between 12-4 pm on every Wednesday in the months of July, August, and September.

<u>DATE</u>	<u>2ND DEP WATER QUALITY PERSON</u>
June 23	Bouchard
June 30	Harmon
July 7	Courtemanch
July 14	Bouchard
July 21	Hahnel
July 28	Bouchard
August 4	McPhedran
August 11	Harmon
August 18	McPhedran
August 25	Hahnel
September 1	Courtemanch
September 8	Parker
September 15	Harmon
September 22	Monitoring ends mid September